

**This Page Is Inserted by IFW Operations
and is not a part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- **BLACK BORDERS**
- **TEXT CUT OFF AT TOP, BOTTOM OR SIDES**
- **FADED TEXT**
- **ILLEGIBLE TEXT**
- **SKEWED/SLANTED IMAGES**
- **COLORED PHOTOS**
- **BLACK OR VERY BLACK AND WHITE DARK PHOTOS**
- **GRAY SCALE DOCUMENTS**

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/917,861

07/31/2001

Soon-Sung Yoo

053785-5024

9467

9629

7590

12/23/2003

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

LANDAU, MATTHEW C

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,861

Applicant(s)

YOO ET AL.

Examiner

Matthew Landau

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I in Paper No. 6 is acknowledged.

Claims 11-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second width greater than the first width (claim 9) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 8 is objected to because of the following informalities: the limitation "the passivation" should be replaced with "the passivation layer". Appropriate correction is required.

Art Unit: 2815

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claims 1 and 20, the limitation “a pixel region defined by an intersection of the gate line and the data line” renders the claims indefinite. It is unclear how a region is defined by a single intersection of two lines. Does this mean the pixel region extends over the intersection? Does this mean the pixel region is limited to the region above the intersection?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (US Pat. 6,091,466, hereinafter Kim).

Art Unit: 2815

In regards to claim 1, as best the examiner can ascertain the claimed invention, Figures 4 and 5F of Kim disclose a substrate 101; a thin film transistor (TFT) disposed on the substrate, the TFT including a gate electrode 111, a source electrode 121, and a drain electrode 131; a gate line 113 arranged in a first direction on the substrate, the gate line connected with the gate electrode of the TFT; a gate insulating layer 117 disposed on the substrate and covering the gate line and the gate electrode of the TFT; an intrinsic semiconductor layer 133 disposed on the gate insulation layer; an extrinsic semiconductor layer 135 disposed on the intrinsic semiconductor layer; a data line 123 arranged in a second direction substantially perpendicular to the first direction disposed on the extrinsic semiconductor layer, the data line connected to the source electrode of the TFT; first and second dummy metal layers 151 formed over the gate line and arranged on opposite sides of the data line; a passivation layer 137 covering the data line; the source electrode, the drain electrode, and the first and second metal layers; and a pixel electrode 141 defined by an intersection of the gate line, the pixel electrode contacting the drain electrode. As can be seen in Figure 4, there is a metal layer 151 in each pixel, therefore there is a metal layer on each side of the data line. Note the term “dummy” is merely a functional label that does not structurally distinguish the claimed invention.

In regards to claim 2, Kim discloses the first and second dummy metal layers 151 are formed of a same material as the data line 123 (column 5, lines 53-57).

In regards to claim 3, Figure 5F of Kim disclose the first and second dummy metal layers 151 are electrically isolated from the data line 123.

In regards to claim 4, Kim discloses the pixel electrode 141 is formed of ITO (column 6, lines 27-30).

In regards to claim 5, Figure 5F of Kim discloses a storage capacitor that includes a capacitor electrode 151, a portion of the gate line 111 and a portion of the pixel electrode 141.

In regards to claim 6, Figure 5F of Kim disclose the portion of the pixel electrode 141 contacts the capacitor electrode 151.

In regards to claim 7, Figure 5F of Kim discloses the intrinsic semiconductor layer 133 extends along the gate insulation layer 117 to cover the gate line 113 and the data line 123.

In regards to claim 8, Figure 5F of Kim discloses the passivation layer 137 has a first width disposed along the first and second directions and a second width covering the intersection of the gate line 113 and the data line 123. It is inherent that the passivation layer has a width at both of these locations.

In regards to claim 10, Figures 4 and 5F of Kim disclose the passivation layer 137 contacts the intrinsic semiconductor layer between at least one of the first and second dummy metal layers and the intersection of the gate line and the data line.

In regards to claim 19, Figures 4 and 5F of Kim disclose a substrate 101; a gate line 113 disposed on the substrate along a first direction, the gate line connected with a gate electrode 111 of a thin film transistor; a data line 123 disposed on the substrate along a second direction substantially perpendicular to the first direction, the data line connected to a source electrode 121 of the thin film transistor; and first and second dummy metal layers 151 disposed over the gate line and on opposite sides of the data line. As can be seen in Figure 4, there is a metal layer 151 in each pixel, therefore there is a metal layer on each side of the data line. Note the term “dummy” is merely a functional label that does not structurally distinguish the claimed invention.

Art Unit: 2815

In regards to claim 20, as best the examiner can ascertain the claimed invention, Figures 4 and 5F of Kim disclose a storage capacitor that includes a capacitor electrode 151, a portion of the gate line 111 and a portion of a pixel electrode 141 disposed at a pixel region defined by an intersection of the gate line and the data line, the pixel electrode contacting the drain electrode 131 of the thin film transistor.

Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Kubo et al. (US Pat. 6,452,654, hereinafter Kubo).

In regards to claim 19, Figures 1 and 2 of Kubo disclose a substrate 101; a gate line 2 disposed on the substrate along a first direction, the gate line connected with a gate electrode 12 of a thin film transistor; a data line 3 disposed on the substrate along a second direction substantially perpendicular to the first direction, the data line connected to a source electrode 15 of the thin film transistor; and first and second dummy metal layers 22/23 disposed over the gate line and on opposite sides of the data line. Figure 1 of Kim shows metal layer 22/23 is in each pixel, therefore there is a metal layer on each side of the data line. Note the term “dummy” is merely a functional label that does not structurally distinguish the claimed invention.

Allowable Subject Matter

Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Art Unit: 2815

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (703) 305-4396.


The examiner can normally be reached from 8:30 AM - 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Matthew C. Landau

Examiner

December 17, 2003


JEROME JACKSON
PRIMARY EXAMINER